

Application No.: 09/845,303

Docket No.: N9450.0014/P014

REMARKS

The application has been reviewed in light of the Office Action mailed on May 18, 2005. Claims 7-28 are pending in the application, of which claims 8, 10, 12, 14, 16, 18, 20, 22, 24 and 26 have been withdrawn from consideration. Claims 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27 and 28 have been examined.

Claims 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27 and 28 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Office Action asserts that in independent claims 7 and 9 the limitation “an electrophoresis medium injection port” cause[s] indefiniteness.” The Office Action asks “[i]s ‘electrophoresis medium’ referred to ‘buffer solution’ (page 9, lines 20-21) or polyacrylamide gel [Amendment (7 February 2005), page 8, line 8].” Office Action, page 2.

In response to the Office Action question, Applicants submit that “electrophoresis medium” can be, for example, a “polyacrylamide gel.” In the art, the electrophoresis medium is contained in a buffer solution. As explained in the February 7, 2005 Amendment, the invention discloses an electrophoresis medium supply portion 30 (Figure 2). Thus, “electrophoresis medium” is contained in the “buffer solution.”

There is no indefiniteness in claims 7 and 9. For example, claim 7 recites a “plurality of capillaries, each being provided with ... an electrophoresis medium injection port for injection of an electrophoresis medium.” Claim 7 further recites an “electrophoresis medium supply portion, which holds the electrophoresis medium injection ports in a bundle, in communication with an electrophoresis medium container.” Thus claim 7 (and claim 9) is consistent in its terminology, and is not indefinite. Applicants submit, therefore, that all of the pending claims are in full compliance with 35 U.S.C. § 112.

Claims 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27 and 28 stand rejected under 35 U.S.C. § 102 as being anticipated by Mathies et al., U.S. Patent No. 5,274,240 (“Mathies”). Reconsideration is respectfully requested for the following reasons.

Claim 7 of the invention recites a “capillary array comprising: a plurality of capillaries, each being provided with ... an electrophoresis medium injection port for injection of

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an electrophoresis medium; ... and an electrophoresis medium supply portion, which holds the electrophoresis medium injection ports in a bundle." This is an important feature of the claimed invention. This feature is illustrated, for example, in Figures 1 and 2, which show a "capillary array which comprises a plurality of capillaries ... of which one ends are bundled." Specification, page 3, lines 15-19. The claimed invention is not limited to the disclosed embodiments.

Mathies fails to teach or suggest this claim limitation, and the Office Action does not assert otherwise. In Mathies, the corresponding ends 23 of the capillaries 21 at the electrophoresis medium side well 26 are separated from each other.

The claimed invention provides significant advantages over Mathies. By collecting the capillaries into a bundle, the user can save man-hours that would be required for connection of the capillaries in the system of Mathies. In Mathies, the capillaries have to be connected one-by-one to a buffer solution container (which contains the electrophoresis medium) on the apparatus side 17 of the Mathies system. Detachment of the capillaries is also made easier in the claimed invention by combining the capillaries into one bundle.

Further, since the electrophoresis medium injection ports are bundled at the electrophoresis medium supply portion, the size of the capillary array can be reduced. Also, even if the injection pressure of the electrophoresis medium into the capillaries is raised, the force applied to the electrophoresis medium supply portion is limited. This is because the force is determined by the product of the pressure and the area of the portion. As such, the electrophoresis medium supply portion of the claimed invention can withstand high injection pressure of an electrophoresis medium.

For at least this reason, claim 7 is allowable over Mathies. Claims 11, 13, 15, 17, 19, 23 and 27 depend from claim 7 and should be allowed together with their base claim. Claim 9 recites, inter alia, an "electrophoresis medium supply portion which holds the electrophoresis medium injection ports in a bundle." Claim 9, and claims 21, 25 and 28 dependent there from, are also allowable over Mathies.

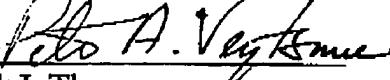
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In view of the above, Applicants believe the pending application is in condition for allowance.

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Respectfully submitted,

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